### Is Ecstasy Dangerous?

It's also very common for dealers to lace Ecstasy with other, even more dangerous drugs like PCP, ketamine, and methamphetamine. Pills sold at rave parties or on the street can contain literally anything, and there's no way to tell what's in a given dose. While pill testing kits can tell you whether a pill contains Ecstasy, they can't tell you what else it contains.

Some studies have also linked Ecstasy use to impotence in men and long-lasting, sometimes permanent, brain damage.

# The latest findings on **Ecstasy** and brain damage

Scientists are uncovering more and more evidence that suggests that Ecstasy can cause serious brain damage. Here's what they've found so far.

- Ecstasy works by forcing the brain to release huge amounts of serotonin, a chemical that helps regulate important brain functions like mood, sleep, and memory.
- These huge releases deplete the brain's serotonin, which causes short-term depression after Ecstasy users "come down." Over time, the brain also becomes less sensitive to serotonin, which can cause depression that lasts for weeks, months, or years.

- Ecstasy also damages the areas of the brain where serotonin is stored. Scientists have found that some of these areas grow back abnormally, and some do not grow back at all, leading to lasting brain damage.
- Ecstasy interacts with other chemicals in the brain to form hydrogen peroxide – the same toxic chemical that's used in hair bleach. This poisons the brain, leading to more damage.

## Ecstasy. A not-so-bright idea

The brain scans on the front of this card show the sharp difference in brain activity for an individual who has never used drugs and one who used the club drug Ecstasy (XTC, MDMA, Adam, etc.) heavily for an extended period, but was off of drugs for at least three weeks before having the scan. The left, bright reddish half shows active serotonin sites in the brain. Serotonin is a critical neurochemical that regulates mood, emotion, learning, memory, sleep, pain, and heart rate. The dark sections in the right half are serotonin sites that are not functioning, even after three weeks without any drugs. In addition to these changes in serotonin sites, scientists have found that Ecstasy injures serotonin neurons. Although these can regrow, they don't grow back normally and might not grow back in the right location.

ECSTASY: It's a no-brainer

Image provided by National Institute on Drug Abuse, National Institutes of Health

## What is Ecstasy?

Ecstasy is the street name for MDMA, 3,4-Methylenedioxy-N-Methylamphetamine, a laboratory-produced drug that was used by psychologists in the 1970s as a tool for therapy. Ecstasy was banned in 1985, based on evidence that it causes long-term brain damage.

Ecstasy is a Schedule 1 Controlled Substance, in the same category as cocaine and heroin. It's manufactured by drug dealers in illegal laboratories and sold on the street. In recent years, it has become especially popular at huge all-night dance parties called "raves." Ecstasy is also known by the names "E," "Adam," and "X."

#### What does Ecstasy look like?

Ecstasy usually comes in pill form. It is also available in a powder form that can be snorted or smoked, but the pill form is by far the most common. Pills come in many shapes and sizes, and makers often put brand-name logos or other symbols on them.

#### Is **Ecstasy** illegal?

Yes. Both Michigan and the federal government have declared Ecstasy a Schedule I controlled substance, in the same category as heroin. Simple possession is a felony that can result in jail, fines, or both. Anyone found guilty of delivering, possessing with intent to deliver, or manufacturing Ecstasy could face life in prison.

## What happens when you take Ecstasy?

Ecstasy is a mind-altering drug that also works as a stimulant. It causes a sense of euphoria, empathy, self-acceptance, and emotional closeness to others.

Ecstasy causes deep depression, anxiety, and paranoia, sometimes for weeks after taking the drug. It increases heart rate and blood pressure. Ecstasy can increase body temperature to as much as 108 degrees and can dehydrate users to a dangerous level. Ecstasy can dramatically lower inhibitions and increase the risk of sexual assault. Some studies have shown that it can cause long-term brain damage and memory impairment, even after a single dose.

### Is **Ecstasy** Dangerous?

At least 100 people have died after taking Ecstasy at rave parties. Most of these deaths resulted from the dangerous combination of Ecstasy's stimulant properties and the hot, crowded conditions at raves. Together, these things can lead to dehydration, heat stroke, kidney failure, and death, particularly in people with heart or circulatory problems.

continued













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